

## Claims

1. Method for detecting at least one further communication device (C) which can be connected to at least one subscriber line (TAL),  
5 line (TAL),  
wherein the transmission function ( $H_{current}$ ) of the at least one subscriber line (TAL) is monitored in respect of significant changes,  
wherein a significant change in the transmission function  
10 ( $H_{current}$ ) is determined when a significant change to the detection of the at least one further communication device (C) connected to the at least one subscriber line (TAL) is indicated.
- 15 2. Method according to claim 1,  
characterized in that  
at least one first and at least one second communication device (A, B) is connected to the at least one subscriber line (TAL) for the purposes of information transmission, with the  
20 transmission function of the at least one first and/or of the at least one second communication device (A, B) being monitored.
3. Method according to claim 1 or 2,  
25 characterized in that  
the transmission function ( $H_{current}$ ) detects the subscriber line (TAL) in approximately periodic time intervals and an average of the transmission function ( $H_{mean}$ ) is derived from the detection results,  
30 the deviation of the currently determined transmission function ( $H_{current}$ ) is monitored by the average of the transmission function ( $H_{mean}$ )

the detection of the at least one further communication device (C) is indicated when a deviation exceeding a predetermined threshold value (t) is determined.

5 4. Method according to one of the preceding claims, characterized in that  
with a subscriber line (TAL) comprising a number of wire pairs, the transmission function ( $H_{current}, H_{mean}$ ) is monitored per wire pair.

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5. Method according to one of the preceding claims, characterized in that  
a monitoring device is represented by the at least one further communication device (C).

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6. Method according to one of the claims 2 to 5, characterized in that  
information is transmitted between the at least one first and the at least one second communication device (A, B) according  
20 to an xDSL transmission method.

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7. Method according to claim 6, characterized in that  
the monitoring is carried out by an xDSL modem assigned to at  
25 least one first and/or at least one second communication device (A, B).

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8. Communication arrangement for the detection of at least one further communication device (C) which can be connected to  
30 at least one subscriber line (TAL), with monitoring means (MOD) for monitoring the transmission function ( $H_{current}$ ) of the at least one subscriber line (TAL) in respect of significant changes, with the monitoring means (MOD) being configured such

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that the detection of the at least one further communication device (C) which is connected to the subscriber line (TAL) is displayed when a significant change in the transmission function ( $H_{current}$ ) is determined.

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9. Communication arrangement according to claim 8; characterized in that at least one first and at least one second communication device (A, B) is connected to the at least one subscriber line (TAL) for transmitting information.

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